UGL REGIONAL LINX

ROAD-RAIL VEHICLE, TROLLEY, TRAILER & PORTABLE PLANT - CERTIFICATION & RE-CERTIFICATION REQUIREMENTS

CRN-STD-ROL-713026361-498

CRN RS 016

LINKING COMMUNITIES. CONNECTING CUSTOMERS.

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Document Control

Function	Position	Name	Date
Author	Principal Rollingstock Engineer	Nic Coulthard	29.02.2024
Approver	A&E Manager	Luke Cunningham	01.03.2024

Revision	Issue Date	Revision Description
1.9	10.11.2021	UGLRL Operational Standards Template applied
2.0	29.11.2021	First approved and issued UGLRL version
3.0	25.02.2022	Appendix 2 numbering corrected
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7.0	03.06.2022	New labelling requirements added
8.0	18.08.2023	Added circumstances in which CRN labels are to be removed.
9.0	01.03.2024	See below

Summary of changes from previous version

Section	Summary of change
All	Revised glossary, engineering report requirements (including 10 year NDT) and forms. Updated certifier appendix.

1 Purpose and Scope

This standard details the process for road-rail vehicle, trailer, trolley and Portable Plant certification and annual re-certification on the CRN.

2 Definitions

Approved Certifier	An engineering person or entity that is listed in this document as approved to conduct inspection of vehicles on behalf of UGLRL.
CRN	NSW Country Regional Rail Network
CRN Manager	The CRN Principal Rollingstock Engineer or their delegate
Evidence of Compliance	Supporting documents that certifies that a particular piece of rolling stock has been inspected and tested for compliance with the appropriate interface standards and is considered safe to operate on the CRN
EWP	Elevated Work Platform (e.g. Cherry Picker)
GVM	Gross Vehicle Mass
Portable Plant	A small rail bound device used for maintenance and capable of being moved on and off track by hand
Rail Guidance System	A dedicated piece of equipment fitted to a road vehicle specifically designed to provide safe guidance of the vehicle when it operates on railway track.
Road-Rail Vehicle	A vehicle designed essentially for operation on road but fitted with rail guidance equipment to permit the vehicle to be readily converted to operate on rail.
RIVR Number	Rail Industry Vehicle Registration Number. A unique serial number allocated to road-rail vehicles and trailer/trolleys when they are first certified for operation on rail.
Road-Rail Trailer	In the context of this document, a road-rail trailer is a small non-powered vehicle designed essentially for road but fitted with rail wheels which enables it to be hauled on rail by a road-rail vehicle or rail-bound infrastructure maintenance vehicle.
“T” Notes	Notes covering operating restrictions and listed in Section 12 of the CRN Train Operating Conditions (TOC) Manual
Rail Trailer	A small non-powered vehicle fitted with rail wheels which enables it to be hauled on rail by a compatible road-rail vehicle or rail-bound infrastructure maintenance vehicle.
Rail Trolley	A small four wheeled vehicle (powered or unpowered) fitted with rail wheels which enables it to be moved by hand on rail by infrastructure maintenance personnel.
Quadricycle/ Trike/ Section Car	A small three or four wheeled self-propelled vehicle historically used for transporting a track worker on rail and now used mainly for recreational purposes.
VIN	Vehicle Identification Number which is applicable to all road vehicles

3 References

3.1 Australian and International Standards

AS 1418 – Cranes, hoists and winches

AS 2550 – Cranes, hoists and winches - Safe use

AS 7500 series – Railway Rolling Stock

3.2 Applicable CRN Standards

CRN RS-019 – Certification Process for Rollingstock (start here if unfamiliar with the CRN)

CRN RS 006 – Minimum Operating Requirements for Road-Rail Infrastructure Maintenance Vehicles

CRN RS 007 – Minimum Operating Requirements for Infrastructure Maintenance Trolleys, Trailers and Portable Plant

CRN RS 008 - General Interface Requirements for Rolling Stock

CRN RS 010 - Vehicle Acceptance Test and Inspection Requirements

CRN RF 006 – Road-rail Infrastructure Maintenance Vehicle Certification Request Form

CRN RF 007 – Trolley, Trailer and Portable Plant Certification Request Form

3.3 Other references

AS7502 Standard for Road-Rail Vehicles

4 Standard Requirements

4.1 General

All Road-Rail Vehicles, Trailers, Trolleys and Portable Plant are subject to the requirements specified in CRN Standards CRN RS 006 or CRN RS 007 as applicable, in order to gain acceptance and be certified to operate on the CRN or CRN worksites. Note quadricycles, trikes and section cars are not within the scope of this standard. Guidance from auxiliary standards listed in sections 3.1 and 3.3 may also be applied if applicable.

Vehicle certification with the CRN Manager will be dependent on the entity holding CRN registration and having appropriate and auditable maintenance and inspection records for the vehicle.

All vehicles under the scope of this process shall have their rail operating suitability re-certified annually in accordance with this standard.

- Each application for initial certification shall be accompanied by a relevant Certification Request Form RF-006 or RF-007, plus a copy of either Appendix 2 or Appendix 3 of this standard.
- Each application for annual vehicle re-certification shall be accompanied by a copy of either Appendix 2 or Appendix 3 of this standard.
- Proposed certification labels (Appendix 1) may be provided with an application but must not be fitted to the vehicle until CRN approval has been granted.

The worksite supervisor/track manager is responsible for ensuring that road-rail vehicles, trailers, trolleys and Portable Plants are certified for operation on the CRN and that a vehicle Pre-Work Inspection Checklist (see Appendix 4) is sighted and endorsed by the worksite supervisor/track

manager's representative before such vehicles are placed on rail. Such documents shall be retained and filed by the owner/operator for audit purposes.

4.2 Engineering Certification

An engineering report shall be provided for new or modified vehicles which provides an assessment of the vehicle's operation on rail (standard gauge). The assessment shall be based on items 1 to 10 in the following bullet list. The assessment shall be performed using finite element analysis (FEA), hand calculations or other appropriate means.

Completion shall be by a professional engineer who has appropriate mechanical or structural competencies and can demonstrate independence from the vehicle acquisition, design and construction process.

The engineering report shall be traceable to the unique vehicle being assessed (via a cover sheet if necessary) and shall consider the vehicle and rail guidance system as a completed assembly.

4.2.1 Engineering Certification for RRVs

For RRVs, the engineering report shall include the following:

1. Vehicles details including the following:

a. Vehicle make, model, year and configuration, including any ancillary equipment.

b. Vehicle identification number (VIN), rail guidance gear make, model and serial number, ancillary equipment make and serial number.

c. Vehicle operating conditions (including any revised tare and gross vehicle mass, and wheel load distribution).

d. A clear statement what on-track function or functions the vehicle is designed for including its operating conditions.

2. An assessment of the base road vehicle's suitability to meet the proposed on-track task, the assessment shall include the following:

a. Rolling stock outline.

b. Maximum loaded mass (gross vehicle mass) on rail.

c. Axle load distribution.

d. Tyre configuration.

e. Diagrammatic or photographic evidence of the vehicle and its attachments.

3. Structural integrity of the vehicle chassis (due to difference in load magnitude and paths between rail mode and road mode) including chassis structure, bending moments and shear forces under worst case loading (maximum vehicle mass, eccentric loading, dynamic loading, track geometry).

4. An assessment of the rail guidance gear and mounting design for its suitability to support and guide the vehicle on track including the following:

a. Definition of the loading on the rail guidance system including maximum vehicle mass, eccentric loading from ancillary equipment, trailer loads, static and dynamic loading,

track geometry, and raising or lowering geometry, and may refer to item 7 in this bullet list for appropriate standards.

b. Structural integrity of the equipment for the expected loading.

c. Method of attachment of the rail guidance gear to the chassis and the attachment integrity (connection or fastener type and loading assessment).

d. System geometry and method of locking rail guidance gear in position (for example over centre design, hydraulic lockouts).

e. Suspension design adequacy in terms of spring capacity and optimum operating range for expected loading (in accordance with item 4 a in this bullet list)

f. Rail wheel, bearing and axle design for expected loading (in accordance with item 4 a in this bullet list).

g. Rotational resistance where applicable for bogie type guidance gear.

h. L/V assessment where applicable in reference to load share or distribution with road wheels.

5. Brake design, capability, capacity and effectiveness of the brakes including failsafe nature of brakes.

6. An assessment of the integrity of ancillary equipment added, including its mounting to the vehicle to produce its on-track functionality, the assessment shall include the following:

a. Any ancillary equipment such as EWPs, cranes, lifting devices, tanks or other equipment which are moveable elements or provide asymmetric loading.

b. The connection of the ancillary equipment to the vehicle.

c. The arrangement of security devices or interlocking arrangements associated with the ancillary equipment.

d. Vehicle stability for elevated and eccentric loading including a stability report.

e. Vehicle compliance with wheel unloading requirements for mobile vehicles with ancillary equipment.

f. SafeWork NSW design registration for EWPs, cranes, and lifting devices.

7. Confirmation that rail guidance gear and ancillary equipment has been designed for relevant standards compliance and confirmation that the relevant components and structures have been designed to a relevant standards (for example Australian standards, Rail Industry Safety and Standards Board standards, International Organization for Standardization standards, International Union of Railways standards, Association of American Railroads standards or equivalent).

Inspection of the final road/rail vehicle construction, including a visual inspection of the finished vehicle and any related manufacturing and construction quality documents to confirm the finished vehicle is compliant with the reviewed design.

9. The report shall include a concluding summary certifying that the vehicles design and construction has been assessed and is deemed safe to operate under the defined loading and operating conditions and maintenance requirements so far as is reasonably practical.

10. The report shall be structured to clearly show the assessment details in items 1 to 9 in this bullet list. If the report is not structured to clearly show these details, a reference section shall be included to provide a clear reference to the applicable sections that the above assessments are detailed in.

In addition, if rail guidance gear is being reused from another vehicle, each component of the rail guidance gear shall be crack tested in accordance with this standard. Any cracked components shall be replaced.

4.2.2 Engineering Report - Trolleys and Support Frames

For Trolleys and Support Frames, the engineering report shall include the following:

1. Bearings used in the wheel assemblies in reference to the maximum expected loading.

2. Axle design used in reference to the maximum expected loading.

3. Frame structure design in reference to the maximum expected loading.

4. Brake design, capability, capacity and effectiveness of the brakes including failsafe nature of brakes.

5. Wheel design used in reference to the maximum loaded mass and maximum expected loading (for non-metallic wheels).

6. The report shall be structured to clearly show the assessment details in items 1 to 5 in this bullet list. If the report is not structured to clearly show these details, a reference section shall be included to provide a clear reference to the applicable sections that the assessments are detailed in.

4.2.3 Engineering Report - Trailers

For trailers, engineering report shall include the following:

1. Wheel design used in reference to the maximum expected loading.

2. Bearings used in the wheel assemblies in reference to the maximum expected loading.

3. Axle design used in reference to the maximum expected loading.

4. Frame structure design in reference to the maximum expected loading.

5. Drawbar design including structural strength and maximum safe hauling load.

6. Suspension design (including any pivoting axle) with reference to the maximum expected loading.

7. Brake design, capability, capacity and effectiveness of the brakes including failsafe nature of brakes.

8. Multiple trailer design, including its affects on frame structure and drawbar design, L/V affects, braking performance, and failsafe brake design.

9. The report shall be structured to clearly show the assessment details in items 1 to 8 in this bullet list. If the report is not structured to clearly show these details, a reference section shall be included to provide a clear reference to the applicable sections that the above assessments are detailed in.

4.3 Compliance Identification

Each certified road-rail vehicle, trailer, trolley or portable plant will be issued by the Approved Certifier with a certification label that must be attached to the vehicle in a readily visible position. Refer Appendix 1 for a sample design which the certifier may tweak to their preference so long as the included data is retained. Old or expired CRN labels are to be removed during the re-certification process. For CRN operation the label shall identify the vehicle by road registration/plant number, label number, RIVR number & Approved Certifier. The label also specifies the rail certification expiry date, GVM, maximum speed and associated operating restriction “T” Notes.

In the case of road-rail vehicles all rail guidance equipment, both front and rear, shall be fitted with compliance plates. The following information shall be recorded on the compliance plates:

- Manufacturer
- Vehicle VIN number
- Date equipment fitted.

Where the compliance plates were not fitted at the time of rail guidance equipment manufacture/installation, a suitable compliance plate shall be fitted at the next recertification inspection.

4.4 Crack Testing

As part of the annual recertification process, the axles used in road/rail vehicles for the rail wheels shall be visually inspected for any damage or defects.

For any rail guidance systems that have been in service for 10 years, an industry recognised NDT method shall be used to test the rail guidance system structural elements for defects (cracking). This shall include, but not be limited to, the following areas:

- rail guidance system structure
- mounting areas on vehicle chassis
- all welds and critical sections and members (of the above areas)
- any areas as identified in the vehicle maintenance manual to inspect (if not already covered)

If the 10-year date occurs between recertifications, the NDT shall be carried out at the previous recertification such that operation of rail guidance systems in excess of 10 years does not occur. Operation of rail guidance systems in excess of 10 years without a 10-yearly NDT is not permitted. If the time in service cannot be readily determined due to lack of records or information on compliance plates, it shall be deemed that the vehicle has been in service for 10 years and a NDT of the rail guidance system shall be carried out. The NDT date shall be stamped on the compliance plates fitted to the front and rear rail guidance systems as a record on the vehicle.

4.5 Road-Rail, Trailer, Trolley and Portable Plants Pre-Work/Operation Inspection

All road-rail, trailer, trolleys and portable plant shall be covered by a suitable maintenance regime appropriate to their duty cycle and work/operating environment. Once a vehicle is certified to operate on the CRN, it shall undergo a daily pre-work inspection and safety check before operation. Such an inspection shall include rail guidance equipment and lifting equipment such as cranes, EWP, etc. All operational defects noted during the pre-work inspection must be recorded, reported and rectified before operation of the vehicle.

4.6 Maintenance Records

The CRN Manager reserves the right to inspect road-rail vehicles, trailers, trolleys and portable plant as well as their pre-work inspection records and log book whilst the vehicles are on the CRN.

Vehicle owner/operators/maintainers shall retain comprehensive vehicle maintenance and inspection records, for audit purposes. The CRN Manager reserves the right, from time to time, to audit such records and check for compliance with maintenance processes.

4.7 Road-Rail Vehicle, Trailer, Trolley and Portable Plant Annual Re-certification

Road-rail vehicles, trailers, trolleys and Portable Plants will be required to be re-certified on an annual basis for operation on the CRN. This will require owners/operators to have their vehicles tested and inspected annually, to verify that the vehicle continues to meet the CRN minimum operating requirements specified in the relevant vehicle standard. In recognition of logistical needs, the annual inspection may be conducted up to 30 days earlier than required in order to maintain the current expiry date. For example, if the current expiry date is 31 December, then the annual inspection may be conducted no earlier than 1 December to achieve an expiry of 31 December the following year.

Test/inspection results are recognised only if undertaken by an Approved Certifier. All re-certifications must be accompanied by a completed Re-certification Checklist (Refer to Appendix 2 or Appendix 3 for the checklist to be used). Refer to Appendix 5 for a listing of currently Approved Certifiers.

For road-rail vehicles fitted with cranes, hoists or winches, such equipment shall comply with the requirements for selection, operation and maintenance as specified in AS 1418 and AS 2550. The

equipment history and age must be listed on an identification plate securely attached to the relevant equipment.

4.8 Elevating Work Platform (EWP) Road/rail Combinations

OHS Regulations require that high risk plant, including boom-type EWPs and scissor lifts with a platform movement greater than 2.4 meters, be design registered in NSW before use. Once a design registration has been obtained, alterations that affect the safety of the vehicle must not be made until the alteration has been approved by SafeWork NSW. For EWPs such alterations include anything that affects the stability, centre of gravity, speed of travel, and/or safety features such as brakes, level indicators and motion-limiting switches. Attaching an EWP to the back of a flatbed truck affects all of the above and could lead to failure of the EWP.

Elevated work platform equipment chained to a flatbed road/rail vehicle will not be design registered, and therefore is PROHIBITED for use on the CRN.

The combined telehandler/work platform must comply with the requirements of AS 1418.10 and be design registered with SafeWork NSW.

4.9 Vehicle De-certification

Road-rail, trailer, trolley and Portable Plant vehicles will be de-certified under any of the following circumstances and must undergo the re-certification process before the vehicle certification will be restored. In all such cases, CRN labels must be removed from the vehicle until the vehicle is successfully re-certified.

4.9.1 Inspection Overdue

Owner/operators failing to re-certify their vehicles before the re-certification expiry date must not be used and may be delisted from the TOC Manual and treated as a vehicle new to the network if left unrectified for more than three months. Vehicles failing in tests or inspections during the re-certification process will also be considered de-certified until corrective actions have been undertaken and the vehicle is re-tested to certify compliance with the standards.

4.9.2 Worksite (Including Track) Incidents

Following any worksite incidents such as derailments, collision or heavy impact to the rail guidance system involving road-rail, trailer, trolley and Portable Plant vehicles, the CRN Manager must be notified. The vehicle/s involved will automatically become de-certified and will remain de-certified until the vehicle/s is/are re-inspected/tested by an Approved Certifier.

4.9.3 Road-Rail, Trailer, Trolley and Portable Plant Vehicle Modifications

Where a vehicle is substantially modified (e.g. change in equipment mounting, or an addition or removal of equipment, such as cranes, or any other change that affects CRN compliance or registration) from its original design, the CRN Manager must be notified. The vehicle must be considered de-certified until such time as the modification is assessed by an approved certifier company and/or competent engineer, where applicable.

4.10 Competence of Equipment Maintainers and Certifiers

Companies that maintain and/or certify road-rail, trailer, trolley and portable plant, proposed for operation on CRN must be in a position to demonstrate the relevant competencies of their personnel to maintain and certify such vehicles. Competencies include:

- Qualified in a relevant trade with knowledge of the purpose and safety requirements applicable to rail equipment fitted to road-rail, trailer, trolley and portable plant.
- Completely familiar with the construction, functionality, maintenance and inspection requirements of rail specific guiding and/or traction and braking equipment fitted to such vehicles.
- Familiar with all operating controls and safety functions installed on the vehicle.

- Capable of competently checking the operation of the rail equipment.
- Competent as assessed and authorised by the CRN Manager in carrying out the testing requirements necessary to establish compliance with the specified acceptance criteria.

Competent persons or entities employing such persons shall retain and maintain evidence of their acquired competency in order to satisfy the CRN Manager's audit requirements.

4.11 Re-use or Recycling of Rail Guidance Systems and Associated Equipment on New Vehicles

In order to install rail guidance systems onto a different vehicle from that which it was originally fitted, as a result of vehicle disposal or change in ownership, vehicles will be required to undergo re-assessment by the CRN Manager or an Approved Certifying Company to determine its suitability for operation. For any rail guidance systems that has been in-service for over 10 years, an internal/external crack evaluation must be performed before the vehicle can be re-certified.

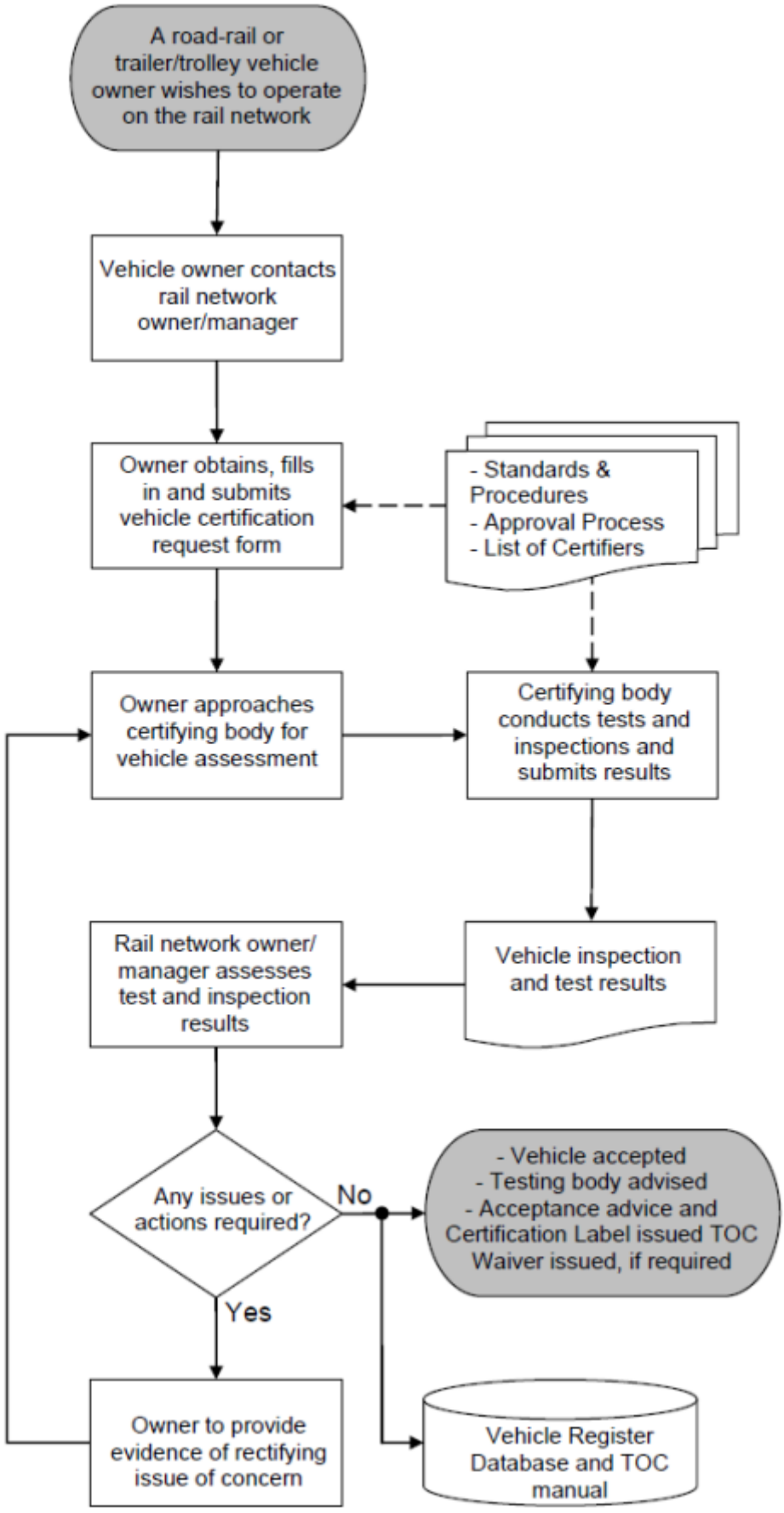
4.12 Certification and Re-certification Flow Chart

New road-rail, trailer, trolley and portable plant, requiring certification (Process 1), will be inspected/tested by an Approved Certifier and assessed by the CRN Manager before acceptance for operation on the CRN.

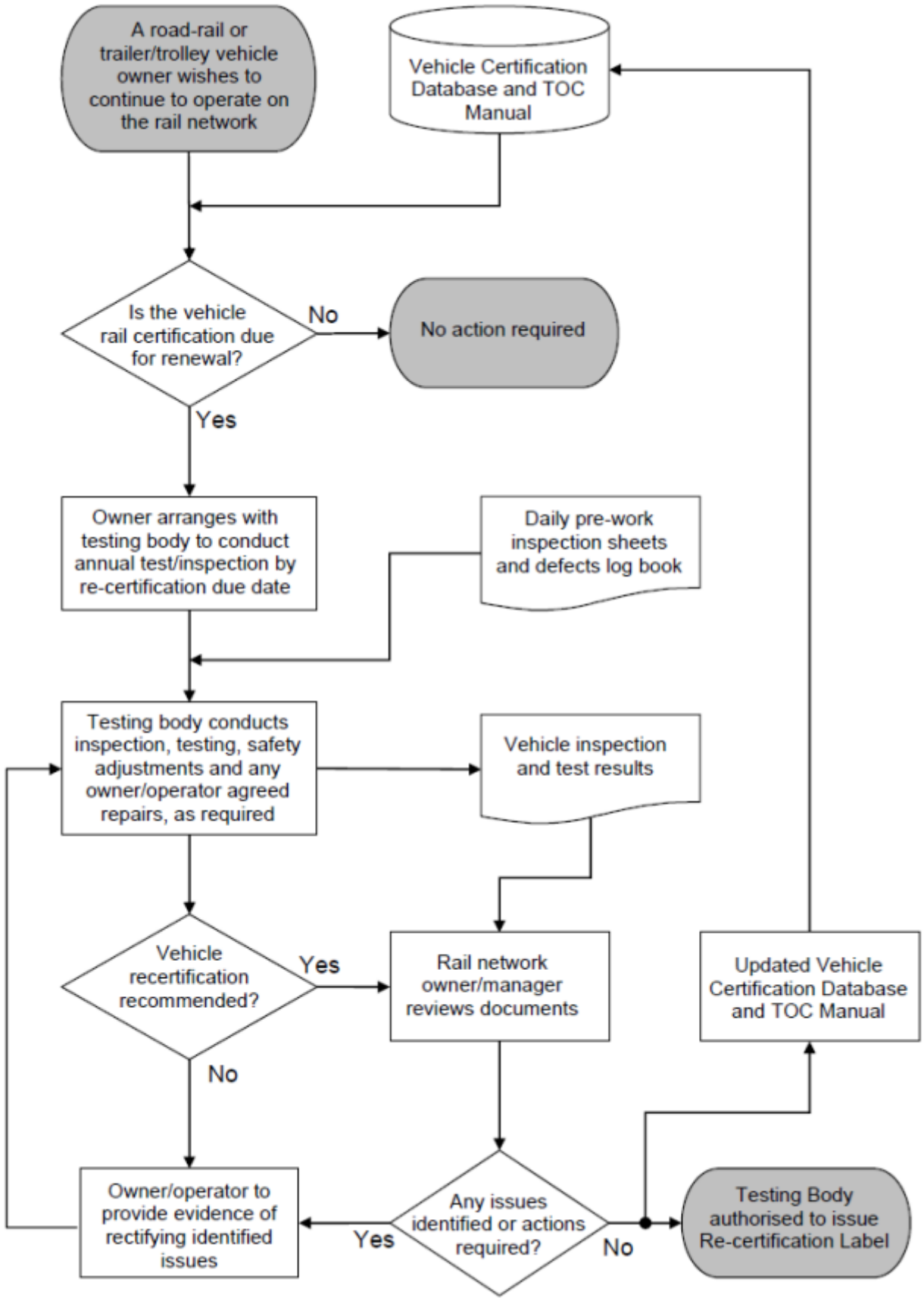
Existing road-rail, trailer, trolley and Portable Plant vehicles will be required to undergo an annual vehicle approval process (Process 2), whereas vehicles involved in an incident, subject to a design modification, change of ownership or that are overdue for re-certification will undergo a situational approval process (Process 3).

The flow cycle for the three different processes are shown in the following pages.

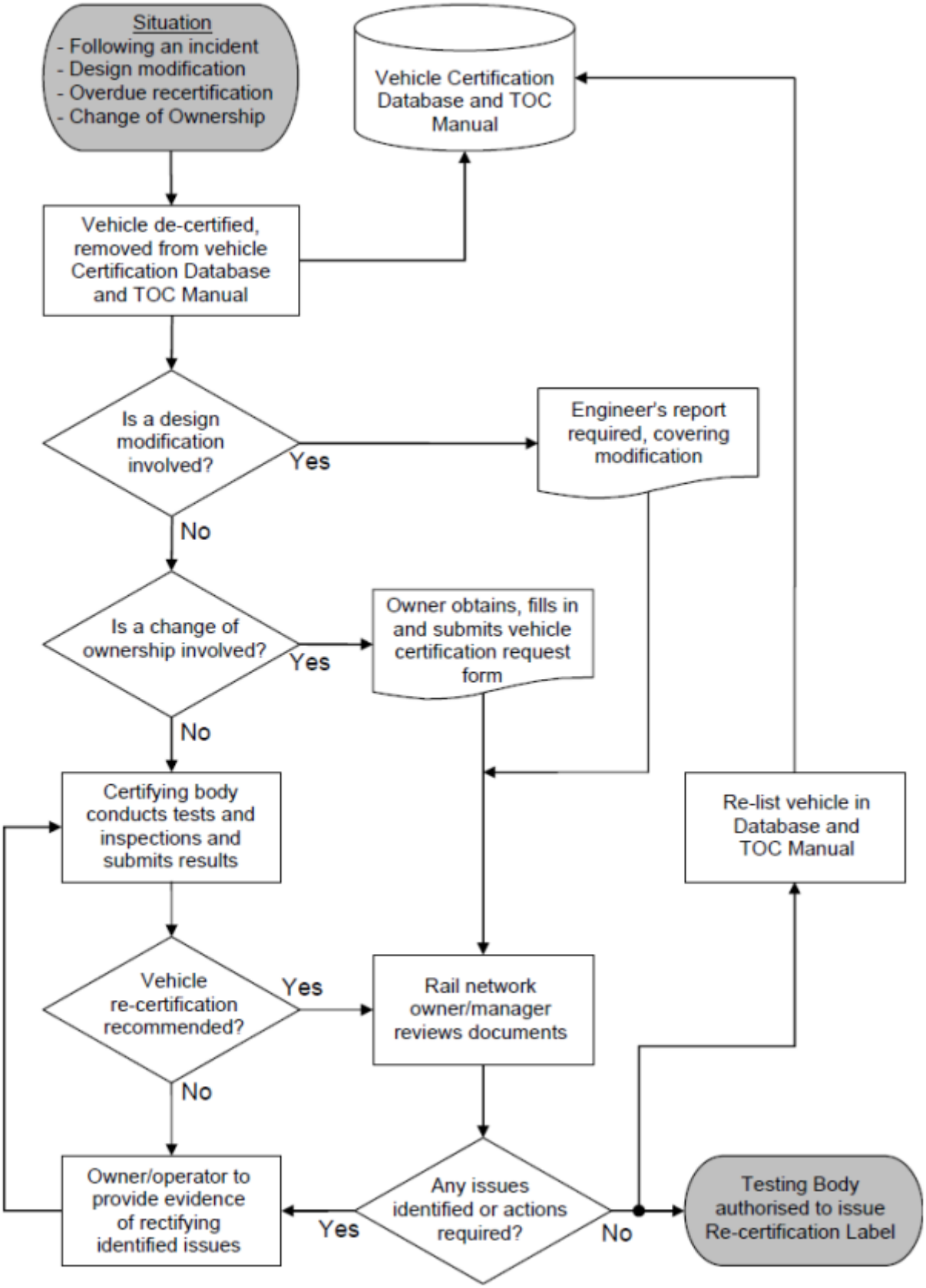
4.12.1 Process 1 – New RRV, Trolley, Trailer and Portable Plant Acceptance



4.12.2 Process 2 – RRV, Trolley, Trailer or Portable Plant Annual Re-certification



4.12.3 Process 3 – RRV, Trolley, Trailer or Portable Plant Situational Re-certification



Appendix 1 Road-Rail, Trailer/Trolley and Portable Plant Vehicle Certification Sample Labels

SAMPLE LABEL

(Illustrative only, colours, format and content may vary per certifier)

Expiry Date: 01/02/2024

Rail Vehicle Certification

UGLRL CRN

Certifier: Joe Smith Label No: 6101

Road Registration No: ABC-123

VIN/Serial No: QURPF456OUR000012

Plant No: ABC123 Max Speed: 30 km/h GVM: 6.75 tonne

Notes: T12, T18

Appendix 2 Road Rail Vehicle - Certification/ Re-Certification Checklist

Rail Industry Vehicle Registration No.			Label No.			
Inspection/Test Date		Location				
Vehicle Description						
Road Vehicle Rego		VIN/Serial No.				
Vehicle ID / Plant No		Vehicle Owner				
Odometer/Hour Reading		Inspected By				

		1st Inspection		2nd Inspection		N/A
1	General vehicle inspection	Pass	Fail	Pass	Fail	
1.1	Check inspection log for correct use and reporting of faults					
1.2	Check for Engineer's report demonstrating structural integrity after modifications (where applicable).					
1.3	Check for Engineer's report demonstrating compliance with stability requirements for EWP's and Work Cover Design Registration (where applicable)					
1.4	Check that rail guidance equipment has compliance plates					
1.5	Check for correct fitting of reflective delineators / reflectors					
1.6	Check for correct fitting of electrical danger signs (if applicable)					
1.7	Check for approved ROPS and FOPS for earthmoving vehicles					
1.8	Check for correct application and operation of a reversing camera					
1.9	Check for existence of a tagged, and in-date fire extinguisher					
1.10	Check for the existence of a fully provisioned First Aid Kit					
1.11	Check road tyres have legal tread depth and there are no signs of excessive 'stepping' from rail use.					
1.12	Cracks/ damage to windscreen do not exceed TfNSW standard VSI.03. Record all glazing damage in comment section below.					
2	Controls/lights					
2.1	Check speedometer for correct function and no damage					
2.2	Check head, tail, reversing, hazard, flashing and marker lights for correct function and no damage					
2.3	Check proximity road-rail deployment switches (where fitted) for correct function and no damage					
2.4	Check warning devices, horn, sirens and audible reversing indicators (where fitted) for correct function and no damage					

2.5	Check height limiting equipment and locking devices (where fitted) for correct function and no damage					
2.6	Check rail wheel deployment controls to ensure that the vehicle cannot be placed on rail in an unbraked configuration					
3	Hydraulic system					
3.1	Check for presence and function of emergency hand pump					
3.2	Check valves and hoses are in a serviceable condition					
3.3	Check hydraulic system for no evidence of damage/leaks					
3.4	Check hydraulic pivot points and ram mountings for security, adequate lubrication and no excessive wear.					
3.5	Check hydraulic system and controls for correct functionality					
4	Rail guidance frame structure and attachment					
4.1	Check front and rear rail guidance suspension (or Flexitor) springs for no excessive wear and no damage					
4.2	Check splined suspension arms - no excess wear or deterioration					
4.3	Check that rail guidance suspension arm clamping bolts are secure and in place					
4.4	Check generally for bolt security and tightness					
4.5	Check mechanical safety latches/locks or counter balance valve for correct function					
4.6	Check front axle lockout (where fitted) for correct function, adjust if needed, and no damage or excessive wear					
4.7	Check anti-derail frame (where fitted) - no misalignment/ damage					
4.8	Check that the ‘over centre' locking (or other positive locking) system is operating correctly					
4.9	Check guidance frame area, welds and mounting points for no cracks or loose connections					
4.10	Check chassis where road-rail frame is connected, for security, no cracks and no excessive wear					
5	Rail wheels					
5.1	Check rail wheel tread profiles and condition are acceptable					
5.2	Check driving wheel pairs for diameter match					
5.3	Check wheel studs and nuts for security, no damage and replace / correct torque if necessary.					
5.4	Check sandwich wheel rubber insulation for acceptable condition (where fitted)					
5.5	Check wheel web, flange and tread for no cracks					
5.6	Check wheel bearings for no damage or excessive wear damage					

5.7	Crack test stub axles and Flexitor splines (where fitted)					
6	Wheel Alignment (after adjustment if necessary)					
6.1	Record road tyre pressure values and check compliant to OEM					
	Tyre pressures - front	Tyre pressures - rear				
	kPa/psi	kPa/psi				
6.2	Record back-to-back gauge of front and rear guide wheels are 1360 mm +0 / -3 mm at rail level.					
	Back-to-back gauge – front	Back-to-back gauge – rear				
	mm	mm				
6.3	Check road wheel and rail guide wheel alignment acceptable (no more than 2mm of toe in)					
	Wheel	Left	Right	Difference		
	Front	mm	mm	mm		
	Rear	mm	mm	mm		
6.4	Conduct twist test to ensure that maximum wheel unloading does not exceed 60%. If exempt, specify details in comment section.					
	Vehicle Side	Maximum % wheel unloading				
		Front rail wheel	Rear rail wheel			
	Left					
	Right					
7	Brakes					
7.1	Test foot, park and road-rail brake for correct function					
7.2	Conduct dynamic brake test from TOC Manual listed maximum speed to satisfy minimum requirements					
	Parameter	Measurements				
	Initial Speed	km/hr				
	Deceleration	m/s/s				
	Stopping Distance	metres				
7.3	Test parking brake holding ability on 1 in 30 grade					
	Grade test used (Yes/No)		Pull test used (Yes/No)			
8	Others					
8.1	Measure rubber tyre or excavator track width					
	Wheel	Measurement/Category				
	Minimum width	mm				
	Maximum width	mm				

8.2	Check Rolling Stock outline (Narrow non-electric) compliance– provide details in comments section if vehicle fails to comply					
8.3	AS7502 Drive Category (Circle one)	1	2	3		
Vehicle has been inspected according to above requirements and manufacturer's requirements and is deemed to be (please circle):		Fit for service		Unfit for service		
Please specify below any operational defects, rectification actions carried out and TOC restrictions applied:						

Authorised Vehicle Certifier		Name (Print)	
Company		Signature	
Date			

Appendix 3 Road Rail Trailer, Trolley & Portable Plant – Certification/ Re-Certification Checklist

Rail Industry Vehicle Registration No.				Label No.			
Inspection/Test Date		Location					
Vehicle Description							
Road Vehicle Rego		VIN/Serial No.					
Vehicle ID / Plant No		Vehicle Owner					
Odometer/Hour Reading		Inspected By					
			1st Inspection		2nd Inspection		
1	General inspection		Pass	Fail	Pass	Fail	N/A
1.1	Check for engineer's report demonstrating structural integrity after modifications						
1.2	Check that the vehicle and drawbar are fitted with compliance plates						
1.3	Check for correct fitting of reflective delineators						
1.4	Check for correct fitting of electrical danger signs (if applicable)						
2	Controls/lights						
2.1	Check tail, hazard, flashing and marker lights for correct function and no damage (where applicable)						
3	Structure						
3.1	For folding trolleys, check for mechanical safety latches/locks for correct function						
3.2	Check frame areas, welds, mounting points for no looseness, damage or evidence of cracks						
3.3	Check for bolt and attachment integrity (tightness)						
4	Wheels						
4.1	Check rail wheel for condition and correct/match dimensions						
4.2	Check web, flange and tread for no cracks, wear or worn profile.						
4.3	Check wheel bearings have no excessive wear or damage (rumble test) and adjust as needed						
5	Wheel Alignment (after adjustment)						

5.1	Record back-to-back dimension of front and rear guide wheels: 1360 mm +0/-3 mm at rail level Back-to-back gauge – front _____mm Back-to-back gauge – rear _____mm					
5.2	Record alignment of the front and rear rail wheels. The front and rear wheel centrelines must be parallel and not exceed 10mm off vehicle centreline. Front: Left_____ Right_____ Difference ____mm Rear: Left_____ Right_____ Difference ____mm					
6	Brakes					
6.1	Conduct dynamic brake test from TOC Manual listed maximum speed to satisfy minimum deceleration requirement when fully loaded					
	Parameter: Initial Speed — Measurements: km/hr Parameter: Deceleration — Measurements: m/s/s Parameter: Stopping Distance — Measurements: metres					
6.2	Trailer/Trolley/ Plant- Conduct breakaway or release test to confirm failsafe brakes.					
6.4	Test loaded park brake holding ability on 1 in 30 grade Grade test used? ____ Pull Test used? ____					
7	Others					
7.1	Check for Rolling Stock outline (Narrow non-electric) compliance– MUST provide justification in comments section if vehicle outline fails to comply					

This vehicle has been inspected according to the above requirements and is deemed to be (Please circle):	Fit for service	Unfit for service

Please specify below any operational defects, rectification actions carried out and TOC restrictions applied:

Authorised Vehicle Certifier		Name (Print)	
Company		Signature	
Date			

Appendix 4 Road -Rail Vehicle, Trailer, Trolley & Portable Plant Pre-Work Inspection Checklist

Rail Industry Registration Number		Label Number	
Inspection/Test Date		Location	
Vehicle Description			
Road Vehicle Rego		VIN/Serial No.	
Vehicle ID / Plant No.		Vehicle Owner	
Odometer/Hour Reading		Inspected by	

Item	Before going on track, check the following items: (where applicable)	✓ Pass	✗ Fail	N/A
1	Inspect rail wheel rims for security and no signs of cracks or fatigue			
2	Check rail wheel studs and nuts for security and no signs of damage			
3	Inspect rail wheel profile for no excessive wear or damage			
4	Inspect rail equipment safety locks, etc. for correct operation and no damage			
5	Test head, tail, flashing, hazard lights for correct operation and no damage			
6	Check lifting and/or elevating equipment for correct function (where applicable)			
7	Ensure load is secured correctly and evenly, within gauge and GVM axle load limits			
8	Ensure electrical warning signs and reflective delineators are fitted			
9	Ensure all fluid levels are appropriate and there are no signs of leaks			
10	Cracks or damage to windscreen do not exceed TfNSW road standard VSI.03.			
11	Test warning devices, horns, reversing beepers & sirens for correct operation			
	Inspector Initials			

Item	After the vehicle is placed on track, check the following items:	✓ Pass	✗ Fail	N/A
12	Inspect rail guidance equipment/suspension are not damaged or misaligned			
13	Check rail guidance equipment hydraulics for correct function and undamaged			
14	Inspect rail guidance equipment assembly are not misaligned or damaged			
15	Confirm over centre locking mechanism is adjusted and not damaged			
16	Check for correct rail wheel/axle alignment for rail operation			
17	Inspect all rail sweeps for correct position and no damage			
18	Inspect anti-derail frame for misalignment and no damage			
19	Check electrical controls for correct function and no damage			

20	Ensure foot, park and rail brake function correctly.			
	Inspector Initials			

Details of Operational Defects and Rectification Actions (or “N/A”):

Worksite Supervisor/ Track Manager Endorsement

I have completed the inspection and understand the vehicle shall not be permitted to operate if it fails any item above that has not been rectified.

Signatory to forward copy of completed sheet to UGLRL Plant Manager

Name (Print)		Signature		Date	

Appendix 5 CRN Approved Road-Rail, Trailer/Trolley and Portable Plant Vehicle Certifiers

Road-rail and trailer/trolley vehicles can be certified for compliance with CRN Standards by any of the following individuals. Users should check the online version of this document for current listings before engaging an assessor.

Certifier(s):	Bruce Durie/ Tim Durie
Company:	ProRail Australia
Address:	74A Mustang Dr
	Rutherford NSW 2320
Phone:	0439 651 114
Email:	admin@prorailaus.com.au

Certifier(s):	Mark Barnett
Company:	TracEast Vehicle Engineering Pty Ltd
Address:	42 Gateway Boulevard
	MORISSET NSW 2264
Phone:	(02) 4870 5551

Certifier(s):	Jason Underwood
Company:	JUDesign
Address:	PO Box 44
	GORDON, Vic 3345
Phone:	(02) 6863 4433

Certifier(s):	Stephen Muscat
Company:	Rail Confidence
Address:	408/55 Holt St
	Surry Hills, NSW. 2010
Phone:	0401 719 971

Certifier(s):	Tom Barker
Company:	RRVC
Address:	830 Barkly St
	Mt Pleasant, Vic 3350
Phone:	0417 576 879

Certifier(s):	Kevin Francis
Company:	Pivotal Industries PTY LTD

Address:	13-15 Ackroyd St
	Parkes NSW 2870
Phone:	0427 907 797

Certifier(s):	Arnold Aranjo
Company:	Aries Rail
Address:	Arnold.aranjo@ariesrail.com.au
Phone:	0438 506 729

Certifier(s):	Rowland Goldsbrough
Company:	Varley Pty Ltd
Address:	29 Elizabeth Street
	Carrington, NSW. 2294
Phone:	0421 199 784